

REMARKS/ARGUMENTS

Initially, Applicants wish to thank the Examiner for acknowledging Applicants' claim for foreign priority and that copies of the certified copies of the priority documents have been received. Applicants also would like to thank the Examiner for considering the materials cited in the Information Disclosure Statements filed in the present patent application on November 7, 2006, January 3, 2007, and January 28, 2009 by the return of the signed copies of the Form PTO-1449 attached to the Official Action. Applicants additionally would like to thank the Examiner for indicating that the drawings are acceptable.

In the Official Action, claim 10 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-2 and 10 were rejected under 35 U.S.C. § 102(e) as being anticipated by KIM et al. (U.S. Patent No. 7,206,892 B2). Claims 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of WOOD et al. (U.S. Patent No. 6,360,053 B1). Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of HASHIMOTO (U.S. Patent No. 4,873,584). Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of SEO et al. (U.S. Patent No. 7,672,566 B2).

Upon entry of the present amendment, claims 1-3, 6, and 8-9 have been amended. Claims 5 and 10 have been cancelled. New independent claims 11-13 have been added. Thus, claims 1-4, 6-9, and 11-13 are currently pending for consideration by the Examiner.

In the Official Action, independent claim 10 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. More specifically, the Official Action asserts that independent claim 10 is directed to non-statutory subject matter, since claim 10 recites a computer program *per se*, which is generally viewed by the USPTO as being non-statutory

subject matter. In the present Amendment, Applicants have cancelled independent claim 10. Thus, Applicants submit that the rejection of claim 10 under 35 U.S.C. § 101 has been rendered moot.

Claims 1-2 and 10 were rejected under 35 U.S.C. § 102(e) as being anticipated by KIM. Applicants respectfully submit that KIM fails to anticipate amended independent claim 1, since KIM does not disclose each and every feature recited therein.

In order to assist the Examiner in fully understanding the distinction between Applicants' claims and the applied prior art, Applicants provide the following background information. Generally, manufacturers of playback devices differ from manufacturers of application programs included in a recording medium to be played back by a playback device. Additionally, there are various types of playback devices. In terms of a special playback rate, for example, some playback devices are capable of performing special playback at a double rate, a rate of four times, and a rate of eight times. Other playback devices are capable of performing special playback at a double rate, a rate of three times, and a rate of four times.

Manufacturers of application programs, as described above, need to manufacture application programs in advance, in consideration that application programs are played back by available various types of playback devices. However, in the existing conditions, since there are too many available playback devices, the manufacturers cannot recognize all of the available playback devices.

Suppose, for example, that an application program included in a recording medium wants to change a playback rate of a digital stream being played back to a rate of eight times, but that the playback device for playing back the recording medium is incapable of performing the special playback at the rate of eight times. In such a case, even if the application program

recorded in the recording medium designates special playback at a rate of eight times, the playback device cannot perform the desired special playback.

That is, if a third party other than manufacturers of playback devices, such as a movie producer, records in a recording medium a control program for controlling special playback of a digital stream performed in a playback device, and attempts to control special playback of a digital stream to be played back by a playback device using such a control program, there is a possibility that playback control is performed with no consideration of the drive performance of the playback device.

If the manufacturers of application programs, such as described above, recognize information relating to available various types of playback devices, it is logically possible for the manufacturers to manufacture an application program containing information relating to all of available playback devices. However, this unnecessarily increases the size of an application program to be manufactured by the manufacturers, and furthermore, places an excessive burden of creating applications on the manufacturers.

Thus, Applicants aim to provide a playback device capable of, when executing an application program recorded in a recording medium, causing the application program being executed to perform special playback control of a digital stream being played back, without placing an excessive burden of manufacturing applications on manufacturers of application programs.

Amended independent claims 1 is characterized, *inter alia*, by the features listed below. Applicants have annotated the features listed below with alpha-numerical identifiers, in order to assist the Examiner in understanding the distinctions between the features recited in amended independent claim 1 and the applied references.

As discussed above, amended independent claim 1 is characterized, *inter alia*, by the following features:

- (a) a playback device for playing back a digital stream and an application in conjunction with each other, comprising:
 - (b) a drive unit operable to load a recording medium;
 - (c) a playback unit operable to play back a digital stream recorded on the loaded recording medium; and
 - (d) a platform unit operable to execute an application recorded on the loaded recording medium to perform playback control, wherein
 - (c1) the playback unit has
 - (c2) a plurality of real parameters used for special playback control, the plurality of real parameters being specific to the playback device,
 - (d1) the platform unit includes:
 - (d2) an execution unit operable to interpret and execute the application recorded on the loaded recording medium; and
 - (d3) a module unit having a first function of providing the application with one of the real parameters upon request by the application, and a second function of, upon request by the application which has received provision of the real parameter, to perform special playback control using the real parameter, controlling the playback unit such that the special playback is performed on the digital stream based on the real parameter used for the request of the special playback control.

Applicants submit that in the playback device, as recited in amended independent claim 1, specifically the features of (c2) and (d3), the application recorded in the recording medium can

receive, from a playback device, a real parameter specific to the playback device for performing playback control. As a result, it is possible to perform playback of a digital stream being played back using the received unique real parameter for performing special playback control.

Accordingly, the playback device, as recited in amended independent claim 1, exhibits a special effect that it is possible to control special playback of the digital stream from an application recorded in the recording medium loaded on the playback device.

In addition, amended independent claim 1 exhibits an effect that manufacturers of applications to be included in a recording medium do not manufacture applications by, in advance, containing in an application information relating to parameters specific to each of various types of playback devices. As a result, the manufacturers of applications are free from the excessive burden of manufacturing applications in the manner previously discussed.

Similarly, new independent claim 11 is characterized, *inter alia*, by the following features:

(e) a playback device for playing back a digital stream and an application in conjunction with each other, comprising:

(f) a drive unit operable to load a recording medium;

(g) a playback unit operable to play back a digital stream recorded on the loaded recording medium; and

(h) a platform unit operable to execute an application recorded on the loaded recording medium to perform playback control, wherein

(g1) the playback unit has

(g2) a plurality of real parameters used for special playback control, the plurality of real parameters being specific to the playback device,

(h1) the platform unit includes:

(h2) an execution unit operable to interpret and execute the application recorded on the loaded recording medium; and

(h3) a module unit having a function of expanding a variable that corresponds to a special playback rate, received from the application, into one of the real parameters that corresponds to the special playback rate, and a function of controlling the playback unit such that the special playback is performed on the digital stream based on the expanded real parameter.

Applicants submit that in the playback device, as recited in new independent claim 12, specifically the features of (g2), (h), and (h3), even if the same variable is used for an application recorded in a recording medium to request for special playback, a playback device for playing back the recorded medium can perform conversion into a playback rate corresponding to the variable, thereby performing special playback of a digital stream.

Accordingly, the playback device, as recited in new independent claim 12, exhibits a special effect that it is possible to control special playback of a digital stream from an application recorded in a recorded medium loaded on a playback device. Additionally, this playback device exhibits an effect that manufacturers of applications to be included in a recording medium are free from the excessive burden of manufacturing applications in the manner previously discussed.

Applicants submit that support for the features provided by the current Amendment is provided the sections of Applicant's disclosure that correspond to paragraphs [0033], [0036]-[0037], [0042],]0047]-[0048], [0050]-[0052] and Figures 5-12 of counterpart patent application WO2005/119675.

With regard to amended independent claim 1, Applicants submit that KIM discloses in KIM's Figure 2 and specification column 1, line 31, through column 2, line 10, a real playlist and a virtual playlist of BD-RE. The real playlist is an original playlist generated automatically at the time of recording respective A/V streams. KIM's Figure 2 shows that an A/V stream is managed by a first real playlist 1 and a second real playlist 2. Compared with this, the virtual playlist is a playlist enabling access to sections selectively chosen from a part or the whole of the A/V stream.

Applicants submit that these real playlists and the virtual playlist are unique to BD-RE that is a recording medium, and does not depend on a playback device. Accordingly, Applicants submit that KIM fails to disclose in the above-cited portions, the platform unit built into a playback device and real parameters used for controlling special playback in the playback device.

Additionally, Applicants submit that KIM discloses in Figure 6 and column 4, lines 7-54, a user interface application information playlist (UIAAppInfoPlayList) for identifying a user interface application information playlist. According to KIM, the user interface application information playlist provides an interface to a user of the playback device.

The user interface application information playlist disclosed in KIM includes a time_bomb_flag. The VDR system 3 searches for and checks the time_bomb_flag. When the time_bomb_flag is set to 1 foot, the VDR system 3 searches for expire_time_info linked with the time_bomb_flag (See KIM's Figure 6, S34.) If the deletion time information (expire_time_info) coincides with or precedes the present time (S35), the A/V stream is deleted (S36). If the time_bomb_flag is not set or the deletion time information is set after the present time, the VDR system 3 performs an ordinary play operation upon user request (S37).

As described above, the user interface application information playlist disclosed in KIM presents a time for partially deleting the A/V stream. Such a time for partial deletion does not vary depending on the model of the playback device. Therefore, the user interface application information playlist disclosed in KIM merely provides a function unique to a recording medium. That is, KIM fails to disclose the features (c2), (d), and (d3) recited in amended independent claim 1. Furthermore, Applicants submit that KIM also fails to disclose the features (g2), (h), and (h3) recited in new independent claim 12.

For at least the reasons discussed above, Applicants respectfully submit that KIM fails to anticipate amended independent claim 1, since KIM does not disclose each and every feature recited therein. Additionally, Applicants submit that dependent claim 2, which depends on amended independent claim 1, is also patentable for at least the reasons discussed above regarding amended independent claim 1, and further for the additional features recited therein. Accordingly, Applicants respectfully request that the rejection of currently pending claims 1-2 under 35 U.S.C. § 102(e) as being anticipated by KIM be withdrawn.

In the Official Action, claims 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of WOOD. Applicants respectfully submit that currently pending dependent claims 3-4, which depend on amended independent claim 1, would not have been obvious to one of ordinary skill in the art at the time of the invention for several reasons. More specifically, Applicants submit that dependent claims 3-4 are patentable since WOOD fails to remedy the distinct deficiencies of KIM discussed above regarding amended independent claim 1, and further for the additional features recited therein.

Applicants submit the WOOD discloses in column 3, lines 35-50, a video recording device that decreases the rate of fast forward playback, and increases the rate of forward and/or

rewinding via a user interface. Additionally, the descriptions of a program corresponding to a user interface are found only in the following sections of WOOD. In column 3, lines 30-34, WOOD states: "Importantly, the disclosed embodiment provides certain user interface features. For example, in the disclosed embodiment it is possible to fast forward and rewind through recorded programming." In column 2, lines 27-31, WOOD states: "The processor in the described embodiment acts under program control by a program stored in program logic memory 102 to perform functions, such as 'fast forwarding' and 'rewinding'....".

In view of the above, Applicants submit that WOOD's program corresponding to the user interface is stored beforehand in a program logic memory 102 of the video recording device. That is, the program corresponding to the user interface disclosed in WOOD is a program that has been in advance incorporated into the video recording device.

In distinct contrast, Applicants submit that in Applicants' system, in the case of a program being incorporated into a video data recorder, the program is manufactured by incorporating information relating to parameters of the video data recorder. Accordingly, Applicants submit that it is unnecessary to have a function of providing information relating to parameters of the video data recorder for performing special playback in response to a request from the application. More specifically, Applicants submit that WOOD also fails to disclose the features of (c2), (d), and (d3) recited in amended independent claim 1. Additionally, Applicants submit that WOOD also fails to disclose the features of (g2), (h), and (h3) recited in new independent claim 12.

For at least these reasons, Applicants currently pending dependent claims 3-4 would not have been obvious to one of ordinary skill in the art at the time of the invention. Accordingly,

Applicants respectfully request that the rejection of currently pending claims 3-4 under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of WOOD be withdrawn.

In the Official Action, claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of HASHIMOTO. Applicants respectfully submit that dependent claim 6, which depends on amended independent claim 1, would not have been obvious to one of ordinary skill in the art at the time of the invention for several reasons. More specifically, Applicants submit that dependent claim 6 is patentable since HASHIMOTO fails to remedy the distinct deficiencies of KIM discussed above regarding amended independent claim 1, and further for the additional features recited therein.

Applicants submit that HASHIMOTO discloses in Figure 4 and column 3, lines 15-34, various controls carried out by the function keys F2, F3, and F4. For example, when the function key F1 is pushed by a user, a one week TV program schedule is displayed on the CRT display in order, and the TV program schedule thus displayed can be modified at will. When the function key F5 is pushed after the user returns home, the sentences shown in HASHIMOTO's Figure 5 are displayed on the CRT display 3 by an interrupt operation. A list of all television programs that were recorded in accordance with an individual program table within a predetermined period of time during the user's absence is displayed once on a display.

However, Applicants note that in the HASHIMOTO's above-cited Figure 4 and column 3, lines 15-34, HASHIMOTO only discloses the function keys to which a TV program schedule, a list of recorded TV programs, etc., are assigned. Accordingly, Applicants submit that HASHIMOTO also fails to disclose features (c2), (d), and (d3) recited in amended independent claim 1. Additionally, Applicants submit that HASHIMOTO also fails to disclose the features (g2), ((h)), and (h3) recited in new independent claim 12.

For at least these reasons, Applicants respectfully submit that dependent claim 6 would not have been obvious to one of ordinary skill in the art at the time of the invention.

Accordingly, Applicants respectfully request that the rejection of dependent claim 6 under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of HASHIMOTO be withdrawn.

Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of SEO. Applicants respectfully submit that dependent claims 7-9, which depend on amended independent claim 1, would not have been obvious to one of ordinary skill in the art at the time of the invention for several reasons. More specifically, Applicants submit that dependent claims 7-9 are patentable since SEO fails to remedy the distinct deficiencies of KIM discussed above regarding amended independent claim 1, and further for the additional features recited therein.

Applicants submit that SEO discloses in Figure 2 and column 1, line 31, through column 2, line 10, Blu-rayDisk Rewritable (BC-RE) and Blu-rayDisk ROM (BD-ROM) having a data structure for managing image data of a still picture. Additionally, SEO discloses in column 4, lines 7-54, a playlist directory, a file system information area, a database area, and an A/V stream area. In column 9, lines 11-55, SEO discloses an application that controls graphics rendering, that the controller 10 controls the source depacketizer 4, the demultiplexer 5, and the AV decoder 6. Source packets constituting an A/V stream are received by the source depacketizer 4, and converted into a data stream (e.g., an MPEG-s transport packet stream). The demultiplexer 5 demultiplexes the data stream into encoded data. The AV decoder 6 decodes the encoded data to produce the original data that was fed to the AV encoder 9. When the slide show is reproduced, a still picture is reproduced in association with audio data that is based on navigation

information. This allows effective linked reproduction of still images along with associated subtitle data or graphics images.

However, Applicants submit that SEO also does not disclose features (c2), (d), and (d3) recited in amended independent claim 1. Additionally, Applicants submit that SEO fails to disclose features (g2), (h), and (h3) recited in new independent claim 12.

For at least these reasons, Applicants respectfully submit that dependent claims 7-9 would not have been obvious to one of ordinary skill in the art at the time of the invention. Accordingly, Applicants respectfully request that the rejection of dependent claims 7-9 under 35 U.S.C. § 103(a) as being unpatentable over KIM in view of SEO be withdrawn.

To summarize, in the case where a playback device including a drive device has the structure in which a request for special playback control of a digital stream is issued from an application included in a recording medium to be played back, a manufacturer of such an application needs to manufacture the application based on the assumption that the application will be played back by various types of playback devices. Accordingly, without information relating to a specific parameter for performing special playback control on the playback device for playback, even if a request for special playback of the digital stream is issued from the application recorded in the recording medium, the special playback of the digital stream sometimes cannot be performed in accordance with the request. Thus, Applicants' claimed playback device has been configured to solve this specific technical problem.

In conclusion, Applicants respectfully submit that the specific combination of features recited in amended independent claim 1 is neither disclosed, nor rendered obvious, by KIM, nor WOOD, nor HASHIMOTO, nor SEO, nor any combination thereof. More specifically, Applicants submit the above-cited references neither disclose nor render obvious at least features

(c2), (d), and (d3) recited in amended independent claim 1, and related dependent claims 2-4 and 6-9.

Additionally, Applicants respectfully submit that new independent method claim 11 generally corresponds to amended independent claim 1, and recites features similar to amended independent claim 1. Furthermore, Applicants submit that, for the reasons provided above, new independent playback device claim 12 is patentable over the cited references, since none of the cited references either discloses or renders obvious at least features (g2), (h), and (h3) recited in the independent claim 12. Additionally, Applicants submit that new independent method claim 13 generally corresponds to new independent claim 12, and recites features similar to new independent claim 12.

Accordingly, Applicants respectfully request that the claim rejection under 35 U.S.C. § 102(e) and the claim rejections under 35 U.S.C. § 103(a) be withdrawn. Additionally, Applicants respectfully request that an indication of the allowability of currently pending claims 1-4, 6-9, and 11-13 be provided in the next Official communication.

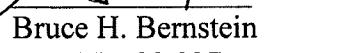
SUMMARY

From the amendment, arguments, and remarks provided above, Applicants submit that all of the pending claims in the present patent application are patentable over the references cited by the Examiner, either alone or in combination. Accordingly, reconsideration of the outstanding Official Action is respectfully requested and an indication of the allowance of claims 1-4, 6-9, and 11-13 is now believed to be appropriate.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejections is made by the present amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

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